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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,928	11/14/2003	Chik Yam Lee	IR-2281 (2-3807)	4807
2352	7590	01/03/2005	EXAMINER	
OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			TRA, ANH QUAN	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 01/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/713,928	LEE, CHIK YAM	
	Examiner Quan Tra	Art Unit 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 14 November 2003.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-3 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Drawings*

The drawing figure 6 is objected because it fails to shows the bases of the mirror transistors are connected to in order to receive bias voltage. The transistors will not function if there is no bias voltage applied to their bases.

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification teaches that the sources of transistors Q2 and Q3 in figure 6 are the positive and negative input terminals of the comparator. Figure 4 shows that the voltage at the positive input terminal of the comparator is  $\Delta V_{be}$ . Thus, the voltage across resistor R2 in figure 6 must equal to  $\Delta V_{be}$ . However, it is unclear how the voltage across resistor R2 is equal to  $\Delta V_{be}$ .

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is misdescriptive and rendered the claim indefinite. It is misdescriptive to recite “first circuit providing a first voltage substantially proportional to Vbe of a first bipolar transistor”. The fist equation in page 4 of the specification teaches that  $IN^- = (IN' - Vbe) \cdot R2 / (R1 + R2)$ . Thus,  $IN^-$  is not proportional to  $Vbe$ .  $IN^-$  is only proportional to  $Vbe$  when  $IN^-$  is equal to  $Vbe$  multiply by a value, i.e. a constant.

Further claim 1 recites “a comparator having respectively input coupled to  $Vbe$  and  $\Delta Vbe$ ”. As stated above voltage at the negative input terminal of the comparator is not equal to or proportional to  $Vbe$ . Furthermore, a voltage can not be coupled.

Claims 2 and 3 are rejected for similar reasons. Further, claim 2 recites “a comparator having respective inputs coupled to  $Vbe$  and  $\Delta Vbe$ ”. Figure 6 shows that the positive input terminal of the comparator circuit is receiving voltage across  $R2$ , not receiving  $\Delta Vbe$ .

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Tasdighi (USP 6005374).

Insofar as understood to claim 1, Tasdighi’s figure 1B shows a bandgap voltage reference circuit comprising: a first circuit (102 and 105) providing a first voltage substantially proportional to  $Vbe$  of a first bipolar transistor (102); a second circuit (103) providing a second voltage  $\Delta Vbe$  substantially proportional to the difference of two  $Vbe$  voltages of two bipolar

transistors (101 and 102); and a comparator (106, 141, 142) having respective inputs coupled to V<sub>be</sub> and ΔV<sub>be</sub> and an output (112) coupled to the base of the first bipolar transistor whereby a voltage substantially proportional to the sum of respective constants multiplying V<sub>be</sub> and ΔV<sub>be</sub> is provided at the output of the comparator (column 3, line 27 and line 50).

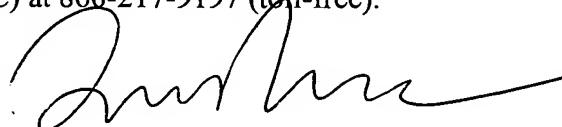
As to claim 3, because circuit figure 1B is a bandgap voltage generator, it is inherent that the output voltage independent of temperature.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan Tra whose telephone number is 571-272-1755. The examiner can normally be reached on 8:00 A.M.-5:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Quan Tra  
Primary Examiner

December 23, 2004